

App. No. 10/731,242
Amendment Dated: June 8, 2006
Reply to Office Action of March 9, 2006

REMARKS/ARGUMENTS

The Office Action mailed March 9, 2006 rejected Claims 1-22. Claims 1, 6, 10, 16, 18 and 19 are amended. Claims 5 and 15 are cancelled. No new matter has been added. In view of the amendments and the following remarks, reconsideration and allowance of all pending claims are respectfully requested.

Rejections under 35 U.S.C. § 101

The Office Action rejected Claims 18-22 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Specifically, the Office Action states that the claimed system appears to be directed to a computer program per se without hardware. Applicants point out that Claim 18 includes limitations for "an application" and "a validation engine". The "application is configured to... store... properties in the markup language element". The "validation engine is configured to validate the markup language document." Applicants assert that the interaction between the application and the validation engine as expressed in Claim 18 sufficiently discloses hardware to qualify as statutory subject matter. Thus, the rejection under 35 U.S.C. § 101 is overcome.

Rejections under 35 U.S.C. §§ 102(b) and 103(a)

Claims 1, 3 and 5-8 are rejected under 35 U.S.C. § 102(b) as being anticipated by "Transforming paper documents into XML format with WISDOM++" by *Altamura*. Claims 2, 10, 12, 13 and 15-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Altamura* in view of "Document Structure Analysis Based on Layout and Textual Features" by *Klink*. Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Altamura* in view of "Using XSL Formatting Objects" by *Eisenberg*. Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Altamura* in view of U.S. Patent No. 6,725,426 issued to *Pavlov*. Claims 11 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Altamura* and *Klink* in view of *Pavlov*. Claim 14 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Altamura* and *Klink* in view of *Eisenberg*. Applicants respectfully disagree.

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Independent Claim 1, as amended, recites, a “method for representing header and footer structures in a markup language document, comprising: determining properties corresponding to a mini-document that relates to at least one section of an application document, wherein the properties comprise at least one of a context free chunk element and a table element; mapping the properties of the mini-document into a markup language element; and storing the properties of the mini-document in the markup language document.”

Altamura describes an XML document processing system. Document images are transformed into HTML/XML formats by aggregating all textual, graphical, layout and logical information extracted in document analysis and understanding processes. An XML processor is used to manage entities and combine them in a single data stream, both for validation by a parser and for access by a main application. Document Type Definition provides a formal set of rules to define a logical document structure, defines elements that may be used, and dictates where the elements may be applied in relation to each other.

Klink describes a rule-based approach for document structure recognition with an exchangeable rule base adaptable to several domains. Common structures like headers and footers are recognized independently. An upper portion of a document is scanned to determine whether a header exists. Likewise, a bottom portion of a document is scanned to determine whether a footer exists.

Eisenberg describes page sequencing to specify the order of page masters. A document consists of a cover page followed by the contents. In a published book, even-numbered pages are left hand pages and odd-numbered page are right hand pages.

Pavlov describes translating between word processing documents and XML documents. Content is retrieved from an XML database and is passed by a content management subsystem to a publishing engine. The publishing engine passes the retrieved content to a server. The server includes executable application programs that apply a style sheet to the content to format the content into a style appropriate for a device that requested the content.

The limitations found in Applicants' amended Claim 1 are not found in any of the other cited prior art references. For example, neither *Altamura*, *Klink*, *Eisenberg*, *Pavlov*, nor any of the other cited prior art references teach “determining properties corresponding to a mini-

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document that relates to at least one section of an application document, wherein the properties comprise at least one of a context free chunk element and a table element.” Moreover, none of the references cited in the Office Action anticipate nor make obvious the invention claimed in Claim 1. Since there are limitations in amended Claim 1 that are not found in *Altamura*, *Klink*, *Eisenberg*, *Pavlov*, or any of the other cited references of record, Claim 1 is proposed to be allowable.

Claims 10 and 18, as amended, include substantially the same limitations discussed above in regard to independent Claim 1. As stated above, Claim 1 is proposed to be allowable. Therefore, independent Claims 10 and 18 are proposed to be allowable for at least the same reasons as independent Claim 1, and notice to that effect is solicited.

Furthermore, dependent Claims 2-4, 6-9, 11-14, 16, 17 and 19-22 are allowable for at least the same reasons that the base claims on which they rely are allowable, and notice to that effect is solicited.

For at least the reasons stated above, it is believed that the rejection of Claims 1-4, 6-14 and 16-22 is overcome and notice to that effect is respectfully requested.

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CONCLUSION

In view of the foregoing amendments and remarks, all pending claims are believed to be allowable and the application is in condition for allowance. Therefore, a Notice of Allowance is respectfully requested. Should the Examiner have any further issues regarding this application, the Examiner is requested to contact the undersigned attorney for the applicant at the telephone number provided below.

Respectfully submitted,

MERCHANT & GOULD P.C.



Ryan T. Grace
Registration No. 52,956
Direct Dial: 206.342.6258

MERCHANT & GOULD P.C.
P. O. Box 2903
Minneapolis, Minnesota 55402-0903
206.342.6200

